Abstract

INTRODUCTION This graduation theses considers with the influence of rehabilitation by electrotactile stimulation of the tongue on stability of stance and gait in patients with degenerative cerebellar ataxia. Electrotactile stimulation of the tongue is an innovative method based on biofeedback principle, which uses additive sensory information about the position of the head to train the postural stability

METHOD We used this method in six patients (four men and two women) with this disease. Patients went through intensive twelve-day therapy. The duration of the lessons was 30 minutes twice a day. We examined postural stability of the patients by using clinical evaluations (Balance Evaluation Systems Test, Dynamic Gait Index), posturography (modified Clinical Test of Sensory Interaction for Balance) and questionnaires (Activities -specific Balance Confidence, Dizziness Handicap Inventory) before and after the therapy.

RESULTS The patients showed significant improvement in both clinical tests after the therapy. The results of posturography measurement are not so definite – the significant improvement was achieved only in some measured parameters. Both questionnaires did not show significant improvement.

CONCLUSION The results of this study show, that electrotactile stimulation tongue could have a potential of utilization in patients with degenerative diseases. However, there would be the continuation of the research needed, especially the enhancement of the group of patients and creating a control group.